



Working Group 12:

## **RISK ASSESSMENT & RISK MANAGEMENT**

Extract from:

### **Planetary Security:**

Peace and Cooperation in  
Times of Climate Change and  
Global Environmental Challenges



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## WORKING GROUP 12

### RISK ASSESSMENT AND RISK MANAGEMENT

*The risks to security, stability and development caused by a changing climate are subject to multiple layers of uncertainty about their direction, magnitude and likelihood. With only murky estimates of future emission trajectories or the subsequent climactic changes, attempts to assess the impacts of climate change on complex human systems can seem like groping in the dark. But with limited budgets and fuzzy horizons, action must be taken today. How do we assess the risks before us, and shape appropriate responses? What can be learned from evolution of Disaster Risk Reduction (DRR)? How do we prioritise our efforts for building resilience and avoiding worst-case scenarios?*

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#### 1. CHALLENGES

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Uncertainty about climate risks is multi-layered. The first two layers of uncertainty relate to the trajectory that emissions will take and the physical changes that the climate will experience as a result of accumulated emissions. The next layers relate to the social, economic and political impacts of these physical climactic changes, and how they will evolve and interrelate. It is challenging to estimate with confidence what is most likely, or what may be a worst-case scenario, and thus how we should respond.

Many potential risks have been highlighted, most prominently for development and human security risks in the Intergovernmental Panel on Climate Change (IPCC) assessment reports, which assigns a level of confidence to each component of their analysis. The IPCC notes that risks result from the confluence of climate impacts, vulnerability and exposure. They note, with high confidence, that trends in exposure and vulnerability are major drivers of changes in disaster risk and are generally the outcome of skewed development processes.

The “A New Climate for Peace” report highlights climate-fragility risks, though without confidence levels, including local resource competition, livelihood insecurity and migration, extreme weather events and disasters, volatile food prices and provision, transboundary water management, sea level rise and coastal degradation, and unintended effects of climate policies.

How can we use risk management approaches to understand and apportion risks and to shape appropriate responses?

## 2. RESPONSES

Risk management is about framing choices and providing options for moving forward, rather than about defining particular solutions. A typical risk management approach involves an iterative cycle of assessment, planning, implementation, evaluation/ reassessment, and planning again.

The process begins with risk assessment, which helps us understand the nature of the risks we face. There are many different risk assessment tools available, focused variously on conflict analysis or exposure to disasters or modelling how pandemics may spread. However, discordance among the various analysis tools, used by different organisations for different purposes, can impede the development of shared understandings and thus of coordinated and effective responses to complex interconnected problems.

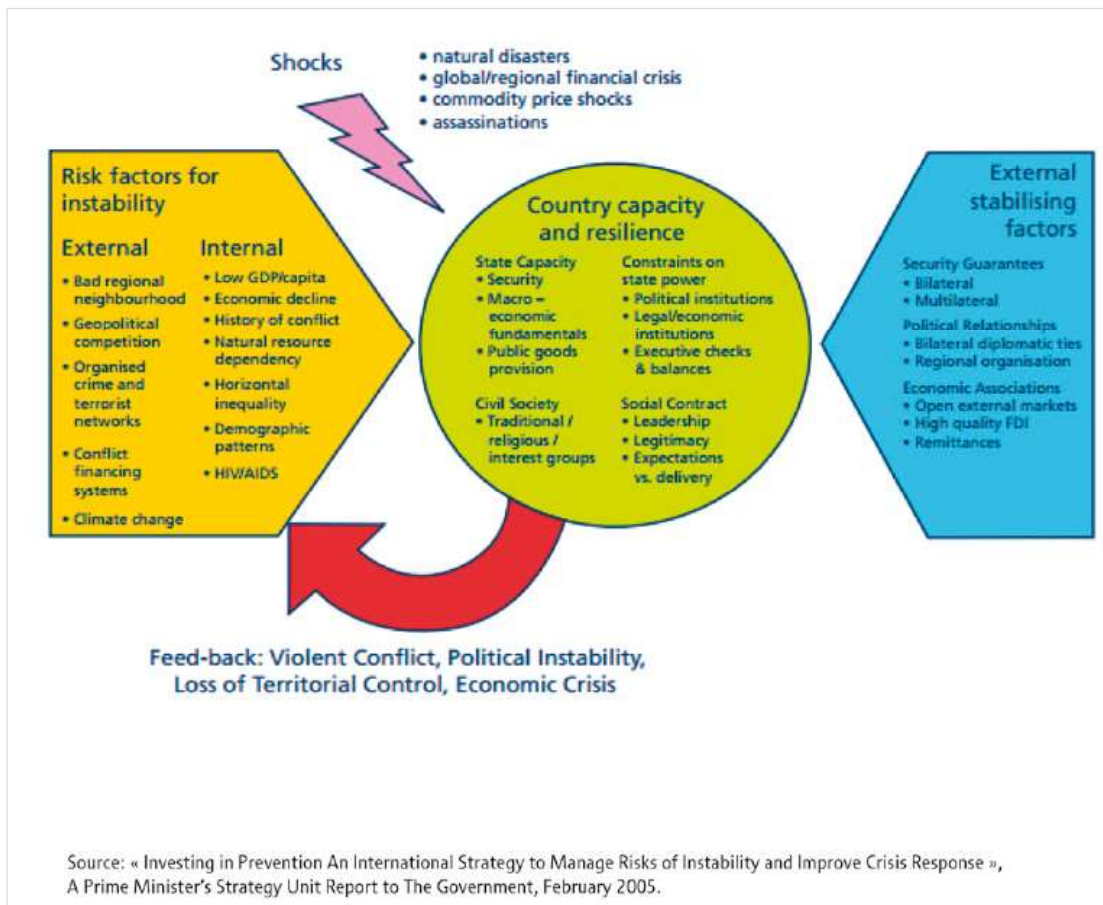
Building on the assessment process, a series of actions can be taken to diminish and respond to the assessed risks:

- i. **Reducing the risk** (mitigation and low carbon development). Fewer greenhouse gas emissions means lesser climate impacts and diminished subsequent risks. Whether efforts to improve understandings of the potential subsequent security and development risks can lead to increased impetus and effectiveness in mitigation negotiations remains uncertain.
- ii. **Sharing/transferring risk** (insurance and risk pooling). Where there is sufficient confidence in the data inputs and risk probability curves, private insurance systems can play a major role in sharing and transferring economic risk, including for disasters. Where the risks are too large or too uncertain, governments are generally required to step in, but in much of the developing world, capacities to do so are missing. And for risks without economic calculability, such as those related to stability and conflict, sharing and transferring risks becomes an exercise in political and social understanding and support.
- iii. **Preparation** (climate adaptation, early warning systems, disaster preparedness, resilience-building, peacebuilding). A very wide range of activities can be of value for helping to reduce the impact of potential security and stability risks related to climate change, beginning with climate adaptation activities already taking place in many countries and expanding to include peacebuilding and capacity building processes.
- iv. **Response and recovery** (disaster response planning, peacekeeping and peacebuilding, post-conflict recovery efforts). Recovering effectively from disasters or conflict works best if plans and resources for crisis recovery are dedicated in advance to understanding how to 'build back better'. Defence actors are likely to play an important role in these efforts.

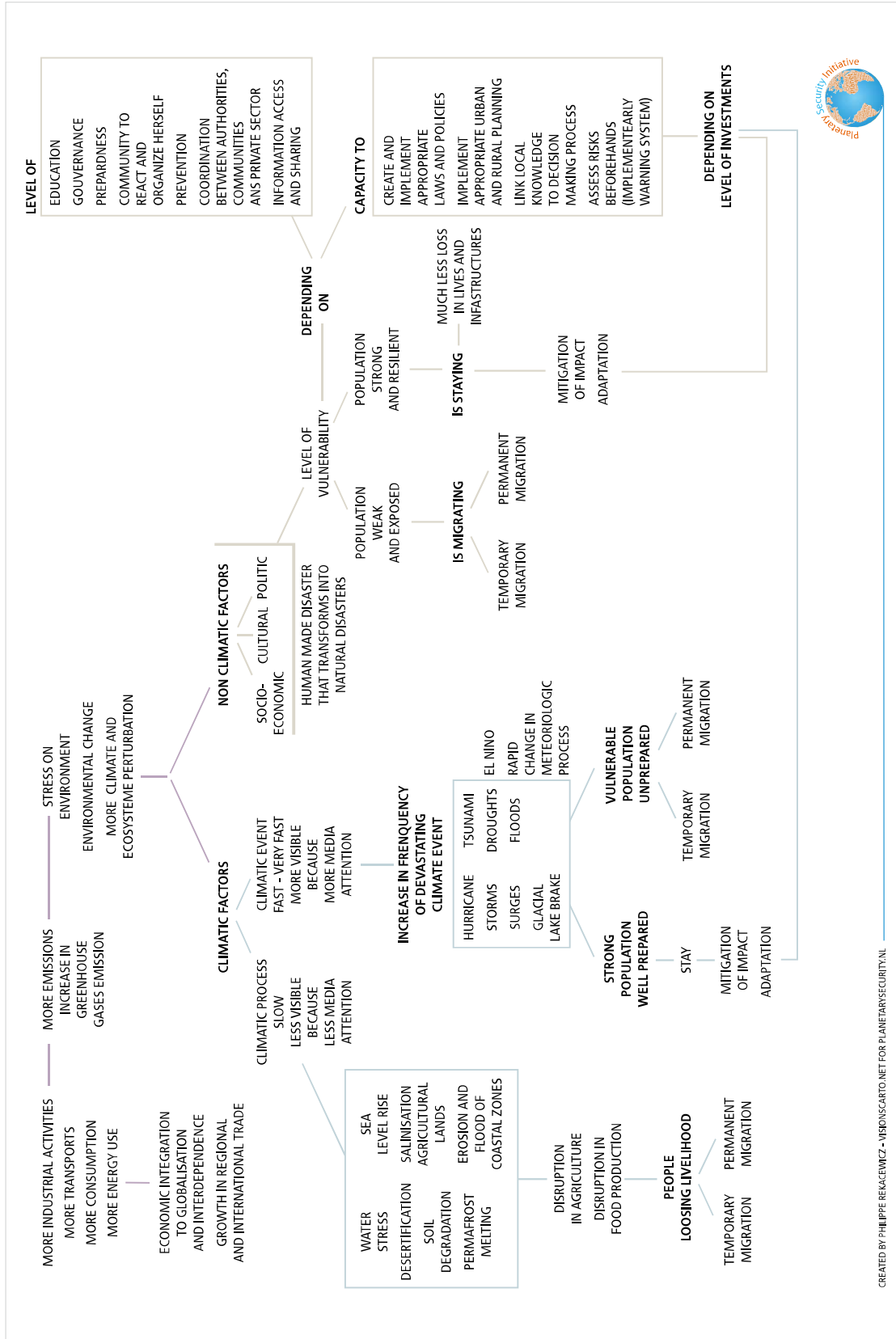
One example of where all of these processes, (assessment, risk reduction, risk sharing, preparation, and response) have already been investigated has been with the evolution of Disaster Risk Reduction (DRR). The Sendai Framework for Disaster Risk Reduction 2015-2030, successor to the Hyogo Framework for Action, was endorsed by the United Nations General Assembly (UNGA) in 2015 with four priorities for action: understanding disaster risk, strengthening disaster risk governance to manage disaster risk, investing in disaster risk reduction for resilience, and enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation and reconstruction. Hyogo and Sendai were developed as part of an ongoing, inclusive, state-centred (but not dominated) process that will see continuous follow-up. Can the successes and challenges of this process provide ideas for managing the broader range of climate risks to stability and development?

### 3. FURTHER READING

- A New Climate for Peace, ‘Resilience Compass Blog’ <https://www.newclimateforpeace.org/blog>
- *Climate Risk Management Journal* <http://www.journals.elsevier.com/climate-risk-management/>
- Intergovernmental Panel on Climate Change (IPCC), *Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (SREX)* (2012) <http://ipcc-wg2.gov/SREX/report/>
- King D et al, *Climate Change: A Risk Assessment* (2015) <http://www.csap.cam.ac.uk/media/uploads/files/1/climate-change--a-risk-assessment-v11.pdf>
- Kunreuther et al, *Risk management and climate change* (2013) <http://go.nature.com/zff2D2>; for the Policy Brief (July 2015) <http://www.csap.cam.ac.uk/media/uploads/files/1/climate-change--a-risk-assessment-policy-brief-v3.pdf>
- Mabey et al, *Degrees of Risk - Defining a Risk Management Framework for Climate Security* (2011) <http://www.e3g.org/showcase/degrees-of-risk/>
- Mitchell and Harris, *Resilience: A risk management approach* (2012) <http://learningforpeace.unicef.org/wp-content/uploads/2015/08/ODI-resilience.pdf>
- OECD Risk and Resilience Tools and Papers <http://www.oecd.org/dac/risk-resilience.htm>
- Sendai Framework for Disaster Risk Reduction <http://www.unisdr.org/we/coordinate/sendai-framework>







## 4. ANALYSIS

Dealing with uncertainties by using scenarios in their planning processes is common in the military, but less so in foreign affairs and the climate change communities. Since the Rio Declaration, states have recognised the importance of applying the precautionary approach in shaping responses to situations that lack full scientific certainty. This fits well with the related idea that it is far better to pursue preventative measures to head off instability or conflict before it happens rather than merely responding to crises. But neither the precautionary approach nor the pursuit of preventative actions are well entrenched in planning and decision-making processes.

Furthermore, researchers on climate change and its impacts are often not able to explain their findings in an understandable manner, and/or (advisers to) policy makers are not always trained to understand the significance of their advice. There exists a big gap between what researchers actually produce and the type of information that can inform (advisers to) policy makers in a meaningful manner. Furthermore, besides policy makers, other audiences also need to be reached. Connecting the data to actual decisions (filling the gap) is no-one's job: not from the environment department, not the foreign ministry, not the development department or intelligence agency.

In practice, it is difficult to agree on including the interlinkages between climate, vulnerability and conflict in political agreements. This, in turns, hampers coordinated meaningful action on the topic. For instance, the reference to conflict and violence as an underlying driver of vulnerability to natural disasters was deleted at the very last moment from the 2015-2030 Framework adopted at the 3rd United Nations World Conference on Disaster Risk Reduction (DRR) in Sendai, Japan (14-18 March 2015). Unfortunately, this is not a unique experience. Recognition of the interconnectedness of risk and vulnerability including specifically the links between climate and security are missing from many other 2015 international policy frameworks. The SDGs for example include references to conflict, to natural disasters, and to climate, but emphasis on the connections between these issues is lacking. The same is true where the latest COP21 text is concerned. Neither conflict nor migration is currently featured. This might be because much of the climate change community is actually not aware of or engaged in many of the processes such as the World Humanitarian Summit or the Sendai DRR framework.

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There exist many different opinions on carrying out risk assessments in the light of insecurities and uncertainties. In practice, hazards can have various impacts depending on the context in which they play out (country, region, community etc.) including many risks that are often not quantifiable, making it extra hard for policy makers to set priorities. Dealing with such complexities is not yet commonplace.

No context is harder to understand than that of a fragile and/or conflict affected state. There is a need for a comprehensive risk assessment to understand and manage these risks, and to prevent climate change from multiplying the risks of conflict and instability in these fragile contexts. The risks in such situation are compound, complex and interrelated with feedback loops within and between the different risks.

## 5. CONCLUSIONS AND RECOMMENDATIONS

The existence of uncertainties about the complex interplay of climate change impacts is not necessarily the primary problem for creating actionable policy. The manner in which the military bases decisions in uncertain situations on scenarios, including middle and worst-case scenarios, could be used as an example for other departments as a manner to deal with uncertainties. Such scenarios, especially where they concern long-term developments, are often based on uncertainties and assumptions. Where climate change is concerned, a lot of data is actually already available. By using as many hard facts and risk assessments as possible, combined with scenarios, better decision regarding the risks of climate change and conflicts could be created. It needs to be accepted that we should strive for “good enough” interventions as we cannot wait to perfect data or the perfect interventions.

In fragile states, any action needs to start from the bottom up – ensuring that it is workable given the situation on the ground – while still making sure that it is linked to and supported by national and global actions. Specifically, the context and existing vulnerabilities need to be well understood, taking into account local priorities and ownership. Furthermore, it is always to be ensured that no harm is done to existing dimensions of resilience. The no harm tenet also needs to be applied to adaptation and mitigation responses to climate change.

Effective responses to address the compound risks should follow the “triple bottom line” approach. For example, in post-conflict urban reconstruction projects, responses should take into account long-term rainfall patterns so that this can be built into the water and sanitation provision. This is going to build resilience not just to conflict drivers such as poor water provision, but also address the drivers of poverty and climate change.

Bridging the gap between climate scientists and (advisors to) policy makers could be achieved by training or assisting researchers in presenting findings in a manner that is understandable and useable for policy makers. Another option would be the training of (advisors to) policy makers so that their capabilities to understand, interpret and use scientific findings.



Working Group 12. Risk Assessment and Risk Management

In developing and using risk assessments, we need to understand how risk factors interlink. In the report “A New Climate for Peace”, a framework is set out that establishes a lens for looking at compound risks and linked responses. It entails looking at possible direct and knock-on impacts on existing conflict drivers, i.e. pre-existing socio-economic and political weak points, such as livelihood and security, inequality, and state provision of basic services. It also requires a deep understanding of the shifting power relations entailed by these risks and our potential responses.

There is a need for reform of decision-making processes, for which top-down political leadership is necessary, even for situations where the ultimate goal is to decentralise decision-making. Benefits from this reform could extend beyond the climate change issue, and include pollution benefits, security benefits etc. When framed as a multi-objective approach it will stand a better chance to lead to a security sector reform, as this might not happen for climate reasons only.

The beneficiary of any support for development, adaptation and resilience building should be able to cope with a host of possible futures given that we do not know exactly what the climate future landscape will look like. It is thus important to ensure that answers to the following issues are investigated in advance, and findings taken into account when planning such support:

- i. Does the intervention (in)directly affect resilience, such as social protection programming?
- ii. Are the outcomes of the intervention sensitive to weather, such as infrastructure, food security, water sanitation etc.?
- iii. Does it have long-term effects?
- iv. Is it difficult to reverse or retrofit the intervention or its effects?
- v. Are the stakes high? Not simply the financial stakes but also the number of people or assets at risk, or potential impact on highly sensitive conflict drivers such as land or forests.

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The G7 response to the “A New Climate for Peace” report – developing a working group to facilitate cooperation and mainstreaming the issue throughout their governments – could bring about necessary changes. At the European Union level, the new EU Global Strategy process is another opportunity to reboot how the Union and its partners deal with climate change, building upon their existing resilience-focused development work. At the last moment, the references to conflict and violence as an underlying driver of vulnerability to natural disasters were removed during the Sendai Conference. Learning lessons from this unfortunate turn of events should inform efforts to address these issues elsewhere, including in the Paris COP21 conclusions, the World Humanitarian Summit in 2016, and in UN debates in general.

Developing good policy on climate change and fragility will be facilitated by the collection, processing and dissemination of good data in a way that is useful for policy makers and for project leaders on the ground. Cooperation across institutions will be essential and public/private partnerships might be useful in bridging gaps. Google/USA/UK Climate Data Initiative aimed at ensuring that scientific data is made widely available for analysis and use in decision-making, and the insurance industry’s plan to make its catastrophic risk management platform open source form cases in point here.



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